# CENTER FOR BEAM PHYSICS SEMINAR

# "RHIC Operation in 2001"

Wolfram Fischer, BNL

Thursday December 6, 2001, 2:00 PM
71-264 (Albert Ghiorso) Conference Room, LBNL
*** **please note special date/time** ***

Abstract: The Relativistic Heavy Ion Collider (RHIC) is now in its second year of operation, and has recently reached its design luminosity. Newly commissioned features include a transition-crossing scheme with fast quadrupoles, a 197 MHz storage RF system, and beta-squeezes down to $\beta^*$=1 m at one interaction point. Effects that limit the bunch current, the number of bunches and the luminosity lifetime will be discussed. Among those are vacuum failures at high bunch current and short bunch spacing, local nonlinear magnetic field errors in the interaction regions, beam-beam effects, intrabeam scattering, and collective instabilities.

Biographical information: Wolfram obtained his Ph.D. from Hamburg University in 1995 for work done at CERN and DESY on long-term stability of particle motion in hadron storage rings. He has been at BNL for most of the time ever since. His current work and interests include RHIC operation, RF commissioning, RHIC injection optimization, machine studies for beam-beam effects, intrabeam scattering, electron-cloud effects, and longitudinal emittance measurements. He is also active on the optimization of nonlinear LHC IR correction within the US-LHC collaboration, and in the development of an RF system for a rapidly cycling medical synchrotron.